

**WHAT IS CLAIMED IS:**

1. A monocular display system mounted to a headgear portion, comprising:
  - (a) a casing;
  - (b) a mounting device attached to the casing, detachably affixing the
- 5 casing to and maintaining the casing aligned with and substantially parallel to the headgear portion;
- (c) an arm attached to the casing and pivotable about a first axis generally orthogonal to the casing; and
- (d) an optics assembly having an end attached to a housing containing a
- 10 display assembly, the housing attached to the arm and pivotable about a second axis generally orthogonal to the casing and generally parallel to the first axis.

  

2. The display system of claim 1, wherein said headgear portion is selected from the group consisting of a cap visor and a hat brim.

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3. The display system of claim 2, wherein said mounting device is a spring clip.

  

4. A monocular display system mounted to a headgear portion, comprising:
  - (a) a casing having an upper portion and a lower portion interfacing at a mating flange determining a reference plane;
  - (b) a mounting device attached to the casing upper portion, detachably affixing the casing to the headgear portion;

(c) an arm having first and second portions determining generally circular upper and lower mating flanges, the upper flange pivotally attached to the casing lower portion, the arm and flanges generally parallel to the reference plane, the arm pivotable at the upper flange about a first axis generally orthogonal to the reference plane; and

5 (d) an optics assembly having a focus mechanism assembly determined by first and second ends, the first end connected to an eyecup, the second end attached to a housing containing a display and backlight assembly, the housing attached to a gimbal attached to the lower flange and pivotable about a second axis generally orthogonal to the reference plane and generally parallel to the first axis.

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5. The display system of claim 4, wherein said headgear portion is selected from the group consisting of a cap visor and a hat brim.

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6. The display system of claim 5, wherein said mounting device is a spring clip.

7. The display system of claim 5, wherein pivotal movement of the arm about said first axis, pivotal movement of the optics assembly about said second axis, and gimbaled movement of said housing allows the eye cup to be positioned for the left or right eye when the headgear is worn by a user.

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8. The display system of claim 5, wherein said display and backlight assembly comprises a video/audio display.
9. The display system of claim 5, wherein said casing contains a circuit board with circuitry for a wireless radio frequency video/audio receiver and a fractal antenna, and said optics assembly further comprises electronic circuitry.
10. The display system of claim 9, wherein said optics assembly circuitry is connected to said display and backlight assembly by a ribbon cable passed through said arm.
11. The display system of claim 9, further comprising a battery pack and an audio earpiece connected by an audio microphone and power cord to the circuit board.

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12. A monocular display system mounted to a baseball-type cap visor, comprising:
  - (a) a primary casing having an upper portion and a lower portion interfacing at a mating flange determining a reference plane, the casing upper portion contoured so as to shape and support the underside of the cap visor, the casing lower portion having therethrough a generally circular hole;
  - (b) a spring mounting clip attached to the casing upper portion, detachably affixing the casing to the cap visor;

(c) an adjustment arm having first and second portions determining generally circular upper and lower mating flanges, the upper flange pivotally attached to the casing lower portion, the arm and flanges generally parallel to the reference plane, the arm pivotable at the upper flange about a first axis

5 5 generally orthogonal to the reference plane; and

(d) an optics assembly having a focus mechanism assembly determined by first and second ends, the first end connected to an eyecup, the second end attached to a display housing containing a display and backlight assembly, the housing attached to a gimbal attached to the lower flange which is pivotable

10 10 about a second axis generally orthogonal to the reference plane and generally parallel to the first axis.

13. The display system of claim 12, wherein:

15 said focus mechanism assembly comprises a manually adjustable focus ring disposed between first and second telescoping focus rings, and a lens retainer bezel, having first and second lens elements, connected to the eyecup;

the display housing is generally spherical and comprises upper and lower hemispheres, and is attached to the gimbal by spindles molded into the gimbal; and

20 the display and backlight assembly comprises a display unit having an active-matrix liquid crystal display (AMLCD) and an LED light source, and a backlight which snaps onto the display unit.

14. The display system of claim 13, wherein said primary casing contains a circuit board with circuitry for a wireless 2.4 GHz video/audio receiver and a fractal antenna, and said optics assembly further comprises a camera module comprising electronic circuitry.

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15. The display system of claim 14, wherein said 2.4 GHz video/audio receiver circuitry comprises:

- (a) a radio frequency filter;
- (b) first and second low noise amplifiers;
- 10 (c) a phase locked loop;
- (d) a demodulator; and
- (e) a signal decoder and LCD driver

16. The display system of claim 14, wherein said camera module electronic circuitry comprises:

- (a) a camera sensor;
- (b) an iris control;
- (c) a microphone;
- (d) an audio amplifier; and
- 20 (e) a video/audio signal processor

17. The display system of claim 12, wherein said primary casing is fabricated from a polycarbonate plastic.